

Appl. No. 10/070,342
Amdt. dated 22 January 2004
Reply to FINAL Office action of 6-Oct-03

Remarks/Arguments

Reconsideration Requested

The applicant has given careful consideration to the examiners' action including grounds of the examiner in rejecting various claims under consideration by applying Yamanashi, *et al.* (US Pat. No. 6,059,781) in view of Esty, *et al.* (US Pat. No. 4,032,738) and in further view of Eggers (US Pat. No. 5,807,392) and Anderson, *et al.* (US Pat. No. 4,607,161) under 35 USC §103. The amendments made hereby to the specification and claims for purposes of clarification, enjoy full support by applicant's specification, claims, and drawings as filed; no new matter has been included. For the following reasons, applicant respectfully solicits reconsideration of each of the examiner's rejections by fully responding below. In further support of the request for reconsideration applicant submits, herewith, declarations of experts: Professor of Electrical Engineering, Dr. Bruce Lanier Walcott; Licensed Physician and Professor of Medicine (focus in plastic surgery), Daniel H. Stewart, M.D., and Licensed Physician and Professor of Surgery, Robert M. Mentzer, M.D.

Claim Rejections under 35 USC § 103

I. Yamanashi, *et al.* in view of Esty, *et al.*

Applicant's claims 1-4, 7, 12-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanashi, *et al.* (US Pat. No. 6,059,781) in view of Esty, *et al.* (US Pat. No. 4,032,738) and further by applying "well known in the art" and "matter of design choice" arguments. On page 2 of the office action, the examiner once again correctly points out that the reference, Yamanashi, *et al.*, does **not** show certain of applicant's claimed features: "Yamanashi et al. fail to I) explicitly disclose a tuning element, II) disclose a switch electrically connected between the inductive element and the conductive cutting tip and III) disclose encasing the impedance matching circuit in a hand-held probe housing." On page 4 of the office action, the examiner correctly points out that "Yamanashi et al. do not disclose a cutting tip releasably engagable to said probe housing." Yamanashi, *et al.* is specifically directed to a surgical probe with a forceps configuration with two blades, with one serving as an active blade and the other passive.

Yamanashi, *et al.* makes an offhanded comment that the endoscopic probe may be provided generally similar to the surgical probe 18 of FIG. 5. Regardless, the *only* supporting

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instrumentation to the surgical probe designs in Yamanashi, *et al.* can be found at col. 4, lines 42 – 52 where they reference a patent cited originally by the applicant, namely, Yamanashi US Pat. No. 5,019,076 (Yamanashi '076). FIG. 9 of Yamanashi '076 discloses the instrumentation detailed and distinguished by the applicant in his specification beginning on page 1, line 33 through page 2, line 23. Therein, as *prima facie* confirmation of the differences, applicant distinguishes his unique claimed structure, from a reference, Patil, A.A., Yamanashi, W.S. entitled *Electroconvergent Cautery*, which, in fact, discloses the design in Yamanashi '076. On page 2, lines 16 -23, applicant states in his specification:

Unlike these known proposed cutting systems, one can readily appreciate the efficient, streamlined design of the handy novel tool and method for cutting of the invention. It is important to note that the new tool preferably has a switch incorporated with a handheld-sized probe housing, as well as impedance matching circuitry encased within the probe housing to help transform load impedance into the characteristic impedance of the input RF power to obtain maximum power transfer (impedance matching) and improve coupling efficiency of the tool network, all of which make the new tool more convenient to a user. Additionally, the tool of the invention operates ...

On page 13 of the office action, the examiner asserts: “Yamanashi et al (USPN 6,059,781) makes no claim of the electrosurgical tool of Yamanashi et al. (USPN 5,019,076) nor does Yamanashi et al. (USPN 6,059,781) *make reference* to a foot pedal *of any kind* or a switch *of any kind* [*emphasis added*].” Thereafter, with no reference, no motivation or suggestion to a switch, the examiner draws his own conclusion by invention, by asserting that “As to the preference and advantages of switch located on the device handle over that of a foot switch, the examiner believes this to be a matter of personal preference or a matter of practicality... .” This is not permitted (please see legal summary below).

There is no need or reason identified or suggested by Yamanashi, *et al.* or Yamanashi '076 to build applicant's probe structure(s) as claimed to combine any reference or, as a matter of design, to arrive at applicant's claimed combination(s) “said impedance matching circuit is encased by a handheld-sized probe housing, and said switch-contact area is encased by said housing [claim 1]” and “providing RF power from the source to an impedance matching circuit electrically connected to a conductive cutting tip through a switch-contact area, said circuit and said switch-contact area being encased by a handheld-sized housing for the probe [claim 14].”

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Rather, an artisan would be led away from making applicant's claimed combination—concluding, instead, that by continuing to focus on the large instrumentation styling of its earlier patent '076, Yamanashi had no appreciation for the handy nature of applicant's design.

On page 3 of the office action, the examiner correctly points out that the reference, Esty, *et al.*, does **not** show certain of applicant's claimed features: "Esty *et al.* do not disclose the switch connected between the inductive element and the conductive cutting tip, . . ." A closer look at Esty, *et al.* (see, especially col. 3, lines 48 – 56) reveals that the Esty, *et al.* pencil-shaped housing 10 is merely a conduit for current to flow from chuck 15 to an electrical generator—which is not shown.

Next, the examiner incorrectly asserts in several places of the office action that "Esty *et al.* disclose an electrosurgical instrument and teach the provision of placing a printed circuit board (31), containing the impedance matching circuitry, within the hand-held housing (10) of the instrument ... [page 3]." Likewise incorrect, albeit confusing, is the statement asserted on page 6: "Due to the application of the teaching Esty *et al.* to use a switch and the disclosed features of Yamanashi *et al.*, the switch is located between the secondary winding and the tip." Then again on page 14, the examiner reiterates in his summary analysis: "Finally, Esty *et al.* teach the provision of placing a printed circuit board (31), *containing the impedance matching circuitry*, within the hand-held housing (10) of the instrument in order to" While a printed circuit board (31) and (41) is shown by Esty *et al.*, there is nothing in Esty *et al.* that suggests the board contains impedance matching circuitry. But rather, board 31 in housing 10 fits under the deflectable metal dome 30, functioning only as explained in col. 4, lines 35 – 38 "... so as to momentarily deform deflectable metal dome 30 thus completing a switch function in association with electrical contact points on circuit board 31." The passage referenced by the examiner, col. 5, lines 29 – 62 states the purpose of board 41: Board 41 merely includes a trace functioning as an electrical contact from one end of housing 40 to the other:

... the main housing 40 is arranged so that printed circuit board 41 extends throughout the length thereof with one tip 42 being flexibly retained at the extreme end thereof. Thus, insertion of replaceable chuck 45 onto the extension 46 will result in electrode 48 forcing downwardly on the upper clad surface of tip 42 thereby establishing a sliding electrical contact. This electrical contact is carried through board 41 into socket 50 which mates with plug 51 so that the downward projections such as 52 establish electrical contact at the other end with contacts

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One is led away from applicant's unique claimed combination, by Esty *et al.* The Esty *et al.* instrument is simply an interface device between an electro-surgical signal general that provides the "electrical functions", and the surgical electrode, as pointed out in Esty *et al.*'s SUMMARY OF THE INVENTION, col. 2 [**emphasis added**], and elsewhere. Esty *et al.*'s unit does not have additional functionalities built in, as that would go against its stated objectives:

... with the feel of a passive surgical tool while permitting selection and **activation of electrical functions from an electro-surgical signal generator** for coupling into an exposed surgical electrode.

...

An object of this invention is to provide a device for **interfacing between** electro-surgical signal generators and a surgical electrode.

Thus, as is the case for Yamanashi, *et al.*, there is nothing in Esty *et al.* to suggest or lead or motivate an artisan to create applicant's design, as claimed. Teachings of various references simply cannot be combined piecemeal in hindsight fashion, to reject a claimed combination, where those references contain no suggestion or motivation to so combine them. It is interesting just how very many connective technical arguments have been made by the examiner, without suggestion to do so by the references, interconnecting features missing from the various references; it's almost as if the process of invention has been engaged in once again, to argue that applicant's claimed invention is not patentable. Nowhere in the Yamanashi, *et al.*, Yamanashi '076, or Esty, *et al.* discussions of respective contemplated structures do these references teach applicant's claimed structure(s); as confirmed by the examiner, features claimed by applicant are missing from each. Applicant's combination of features provides for greater control and flexibility to users. It is difficult to imagine how one could be led by cited references to combine them as has been done here to reject applicant's apparatus and method claims.

II. Yamanashi, *et al.* in view of Esty, *et al.* and Eggers

Applicant's claims 6 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatenable over Yamanashi, *et al.* (6,059,781) in view of Esty, *et al.* (4,032,738) and further view of Eggers (5,807,392). Once again Eggers '392 portrays a resistively heated thermally cutting and coagulating surgical instrument that has a handheld unit with several key components built as separate features, consistent with the Yamanashi and Esty, *et al.* designs. While Eggers '392 is missing any suggestion of a local switch mechanism, similar to Yamanashi *et al.*, it has been cited for piecemeal adding the following feature (page 9 of the office action), in hindsight:

... One end of the cable (16) is connected to the treatment device by connectors (52 and 54), while the other end is attached to the generator (14) by connectors (48 and 50). The cable release assembly is comprised of the connectors (52 and 54) and the distal end of the cable (16) and opposing engaging connectors (125 and 126) located in the proximal end of the handle or handle portion (22), ...

III. Yamanashi, *et al.* in view of Esty, *et al.* and Anderson, *et al.*

Applicant's claims 5, 19, 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanashi, *et al.* (6,059,781) in view of Esty, *et al.* (4,032,738) and of Anderson, *et al.* (4,607,161). Anderson, *et al.*'s technical discussion has a narrow focus and is directed to a limit switch that "requires no outside electrical power source in the vicinity of the switch itself ... [and] replaces the presently used limit switches electrically connected to an external power source, with a device which utilized fiberoptic transmission of light as the signal medium [col. 2, lines 26 – 32]." At the top of col. 4 of Anderson, *et al.* they explain that the only contemplated application of their disclosure is to a 'limit switch' which is defined: "a fiberoptic switch system for monitoring an external condition or stimuli, such as the position of a switch or moving part or some other physical condition which is desired to be monitored." There is no discussion in Anderson, *et al.* of an electro-surgical instrumentation or suggestion that the limit switch might work with such instrumentation. Anderson, *et al.* is silent as to key features claimed by applicant. As set forth further, below, it well established that references cannot be combined where there is no suggestion to so combine. In *C.R. Bard, Inc. v. M3 Sys., Inc.* (9/30/1998, No. 96-1165), the Court of Appeals for the Federal Circuit (CAFC) pointed out:

... When a patent describes a new mechanical device that can be viewed as a new combination or arrangement of mechanical components, the legal conclusion of obviousness requires that there be some suggestion, motivation, or teaching in the prior art whereby the person of ordinary skill would have selected the components that the inventor selected and used them to make the new device. See *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072, 20 USPQ2d 1377, 1379 (Fed. Cir. 1993) ("When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination."); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934, 15 USPQ2d 1321, 1323 (Fed. Cir. 1990) (it is insufficient that prior art shows similar components, unless it also contains some teaching, suggestion, or incentive for arriving at the claimed structure).

The CAFC has recognized, elsewhere, that one "... cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988).

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"Our case law makes clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references." *See In re Dembiczak*, 175 F.3d 994 at 999, 50 USPQ2d 1614, at 1617 (Fed. Cir. 1999). "Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." *Id.* *In re Dembiczak*, the CAFC continued by explaining:

Our analysis begins in the text of section 103 quoted above, with the phrase "at the time the invention was made." For it is this phrase that guards against entry into the "tempting but forbidden zone of hindsight," *see Loctite Corp. v. Ultraseal Ltd.*, [references omitted], when analyzing the patentability of claims pursuant to that section. Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id.*

...

To the contrary, For example, the Board finds that the Holiday bag reference depicts a "premanufactured orange" bag material, *see Dembiczak*, slip op. at 21, finds that Shapiro teaches the use of paper bags in various sizes, including "large", *see id.* at 22-23, and concludes that the substitution of orange plastic for the crepe paper of Holiday and the paper bags of Shapiro would be an obvious design choice, *see id.* at 24. Yet this reference-by-reference, limitation-by-limitation analysis fails to demonstrate how the Holiday and Shapiro references teach or suggest their combination with the conventional trash or lawn bags to yield the claimed invention Because we do not discern any finding by the Board that there was a suggestion, teaching, or motivation to combine the prior art references cited against the pending claims, the Board's conclusion of obviousness, as a matter of law, cannot stand [list of references omitted].

IV. Comment concerning reference made to rejections under 35 USC § 102 / Anticipation

On page 13 of the office action, the examiner has asserted the following: "If Yamanashi et al (USPN 6,059,781) identified or suggested reasons for arriving at Applicant's claimed combination, a 35 U.S.C. 102(b) rejection would have been made." Merely suggesting reasons for arriving at a claimed combination, where a claimed feature is not specifically referenced or disclosed with sufficient detail, is not grounds for rejection under §102. As we know: "For a prior art reference to anticipate in terms of 35 U.S.C. §102, *every* element of the claimed

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invention must be identically shown in a single reference . . . These elements must be arranged as in the claim under review . . .," *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990). The Federal Circuit has reiterated that "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention, [*Scripps Clinic & Research Foundation*]" . A prior art reference anticipates a claim only if the reference discloses, either expressly or inherently, every limitation of the claim. See *Verdegaal Bros., Inc. v. Union Oil Co.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "[A]bsence from the reference of any claimed element negates anticipation." *Kloster Speedsteel AB v. Crucible, Inc.*, 230 USPQ 81, 84 (Fed. Cir. 1986). An anticipation rejection under § 102 can stand against a pending claim *only* if a single piece of prior art discloses a combination including *each* element of the pending claim such that each prior art element is identical to a corresponding, similar structurally-arranged element of the pending claim.

V. Claim Rejections under 35 USC § 103 – Legal Summary

It is a long-standing rule that, when determining the patentable nature of a claimed invention which has two or more elements "the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 221 USPQ 481, 488 (Fed. Cir. 1984). Teachings of the prior art simply cannot be combined when the prior art contains no suggestion or motivation to combine them. See *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 221 USPQ 929, 933 (Fed. Cir. 1984). There can be no suggestion to combine where a reference teaches away from its combination with another source. A reference may be said to 'teach away' when a person of ordinary skill, upon reading the reference, would be discouraged from following a particular path or would be led in a direction divergent from the path that was taken by the applicant (for example, if the reference is combined as has been done, it would produce a seemingly inoperative device). As the Federal Circuit reiterated, see *In re Fritch*, (Fed. Cir. 1992):

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. . . . This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

One must look to see whether an artisan, with the references before him/her, could have made the claimed combination *without the exercise of invention*. Even if a primary reference *might be modified* by one skilled in the art to form the claimed structure, this does not make the modification obvious unless the prior art specifically suggests the desirability and details of the modification, see for reference *In re Laskowski* (Fed. Cir. 1989). It is known that a combination made up of elements taken piecemeal from separate references, where there is no teaching or

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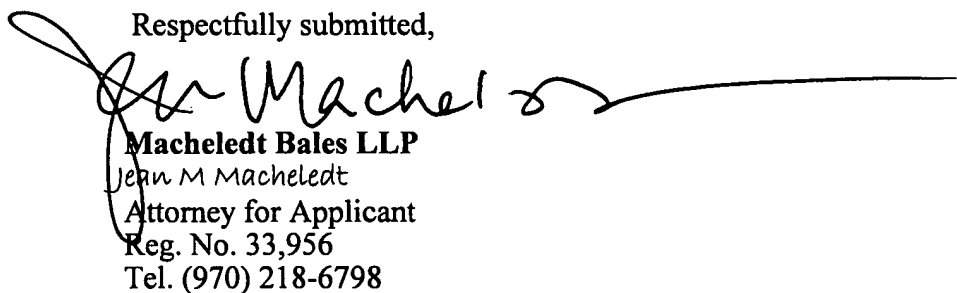
suggestion to so combine, cannot properly be applied against a claimed invention to render it obvious within the meaning of 35 U.S.C. § 103.

VI. Summary/Conclusion and Request for Reconsideration

In sum, after careful consideration of the references, one can see that each fails to disclose, teach or suggest the instant unique claimed invention. When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references. A closer look reveals that each reference identified stops short of appreciating or providing any motivation to arrive at the structures claimed in applicant's independent claims. And, although each dependent claim depending from an independent claim containing patentable subject matter is also considered patentably distinct, applicant's dependent claims include further limitations not taught or suggested in any combination of the references cited. Nothing can be found in the references to lead an artisan to try to combine them as has been done by the examiner, and nothing indicates any need to do so.

In further support hereof and pursuant to 37 C.F.R. 1.132, declarations have been made by experts. An original, executed copy of each declaration is included herewith for the record. The claims have been amended. Each of claims 1 – 20 overcome the examiner's outstanding §103 rejections, and as such, are patentably distinct from the art. Once again, it is submitted that applicant's claims contain allowable subject matter; therefore, favorable reconsideration is respectfully solicited. Please do not hesitate to call the undersigned.

Respectfully submitted,


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enclosures

► Declarations under 37 C.F.R. 1.132 traversing grounds of Rejection